

4.11 MINERAL RESOURCES

INTRODUCTION

This section describes the impacts on County mineral resources associated with the urban development envisioned under the Draft General Plan and impacts associated with extraction of those mineral resources that would be expected to occur under the 20-year timeframe of the Draft General Plan. Specifically, this section focuses on how development at the proposed intensities would affect the availability of mineral resources, result in land use conflicts, or affect supply.

ENVIRONMENTAL SETTING

Mineral resources within Fresno County are described in Chapter 7.9, Natural Resources, Mineral Resources in the *Fresno County General Plan Background Report*, which is hereby incorporated by reference and summarized below.

Fresno County has been a leading producer of minerals because of the abundance and wide variety of mineral resources that are present in the County. Extracted resources include aggregate products (sand and gravel), fossil fuels (oil and coal), metals (chromite, copper, gold, mercury, and tungsten), and other minerals used in construction or industrial applications (asbestos, high-grade clay, diatomite, granite, gypsum, and limestone). Figure 7-7 Mineral Resource Locations, in the *General Plan Background Report (Background Report)* illustrates the general distribution of minerals throughout the County. However, the California Division of Mines and Geology (CDMG) has not performed a comprehensive survey of all potential mineral resource locations or classified other locations within the County into Mineral Resource Zones (MRZ).

For the period 1994 - 95, there were 18 active mines and mineral producers in Fresno County. The principal mineral producing locations and commodities are shown in Figure 7-8 in the *Background Report*. Fluctuating markets have affected the rate of extraction, but the potential for meeting future market demand remains good for several of the minerals.

Aggregate and petroleum are considered the County's most significant extractive mineral resources. The State Department of Conservation, Division of Mines and Geology has classified land as Mineral Resource Zone 2 (MRZ-2) along the San Joaquin River and Kings River, as shown in Figure 7-9 in the *Background Report*. Figures 7-10 and 7-11 in the *Background Report* show the locations of the MRZs in greater detail.

The original 1988 study that classified aggregate resources in the Fresno Production-Consumption (P-C) Region, leading to the designations along the San Joaquin and Kings Rivers, was updated in 1999. As of December 1997, seven mines, operated by six different companies, were producing Portland cement concrete (PCC)-grade aggregate in the Fresno P-C Region. In 1997, annual demand was

approximately 4.7 million tons, based on a population of 748,000. The calculated annual per capita consumption was 6.5 tons. All of the aggregate produced within the Fresno P-C Region is consumed within the region. Based on current estimates, the 93 million tons of presently permitted Portland cement concrete (PCC)-grade aggregate resources (reserves) with the Fresno P-C region will supply regional demand until the year 2011.

The aggregate resources on the San Joaquin River, which have been the primary source of construction materials for almost all of the construction in the Fresno region are almost depleted, as evidenced by their reclassification to MRZ-1. Designated resources on the Kings River deposits are the only other locally available sources for aggregate in the most densely urbanized areas where most of the future growth is anticipated to occur. Figures 7-12 and 7-13 in the *Background Report* illustrate the locations of aggregate resource areas along the San Joaquin and Kings Rivers, respectively. In December 1999, Calaveras Minerals Inc. (CMI) was granted an Unclassified Conditional Use Permit for extraction and processing operations on the Kings River. Projected processing volumes are estimated to be 2 million tons per year by approximately 2006.

Oil production has long been a major industry in western Fresno County, particularly in the Coalinga area. Extensive oil recovery operations are located mostly to the north of the city of Coalinga. Oil companies such as Chevron USA, Union Oil Company, Shell Production, and Santa Fe Energy have substantial land holdings in the area. Natural gas and natural gas liquids occur in oil sands or with oil in an overlying gas cap or as dry gas in separate zones in oilfields and in separate gas fields.

REGULATORY SETTING

Mineral Resource Zones

Sections 2761(a) and (b) and 2790 of the *Surface Mining and Reclamation Act (SMARA)* provide for a mineral lands inventory process termed classification-designation. The California Division of Mines and Geology, and the State Mining and Geology Board are the state agencies responsible for administering this process. The primary objective of the process is to provide local agencies, such as cities and counties, with information on the location, need, and importance of minerals within their respective jurisdictions. It is also the intent of this process, through the adoption of Draft General Plan mineral resource management policies, that this information be considered in future local land-use planning decisions. Areas are classified on the basis of geologic factors, without regard to existing land use and land ownership. The areas are categorized into four MRZs. Of the four categories, lands classified as MRZ-2 are of the greatest importance because they identify significant mineral deposits of a particular commodity. MRZ-3 areas are also of interest because they identify areas that may contain additional resources of economic importance. Areas designated by the Mining and Geology Board as "regionally significant" are incorporated by regulation into Title 14, Division 2 of the California Code of Regulations. Such designations require that a lead agency's land use decisions involving designated areas are made in accordance with its mineral resource management policies, and that they consider the importance of the mineral resource to the region or the state as a whole and not just the lead agency's jurisdiction.

Local Mineral Resource Management Plans

The San Joaquin Regional Parkway Plan is a regional resource management plan for the San Joaquin River. The Parkway Plan contains several mineral resources goals and objectives that support the Parkway purposes. The City of Fresno General Plan (current adopted plan and draft update) and the current Fresno Municipal Code Zoning Ordinance contain policies requiring the protection of aggregate resources and the reclamation of mined areas in the Parkway. A Regional Plan for the Kings River, first adopted in 1976, was amended in 1987 to include the MRZ-2 zones. Land use planning components of the Parkway Plan and Kings River Regional Plan are described in greater detail in Chapter 1, Land Use, in the *Background Report*.

Development Near Oil and Gas Fields

No building intended for human occupancy may be located near any active oil or gas well unless suitable safety and fire protection measures and setbacks are approved by the local fire department.

The State Oil and Gas Supervisor is authorized to order the reabandonment of any previously plugged and abandoned well when construction of any structure over or in the proximity of the well could result in a hazard (Public Resources Code Section 3208.1). In addition, if any plugged and abandoned or unrecorded wells are damaged or uncovered during excavation or grading, the State requires specific notification and remedial plugging operations.

PLAN ELEMENTS

Development under the Draft General Plan would increase the number of people in existing incorporated areas, primarily Fresno and Clovis, and their spheres of influence. Development in western Fresno County and other unincorporated areas would be limited. The Draft General Plan would result in residential, commercial, industrial, and public uses being constructed in areas where mineral resources are present or could exist. The Draft General Plan contains the following policies that address mineral resources:

Policy OS-C.1	The County shall not permit incompatible land uses within the impact area of existing or potential surface mining areas.
Policy OS-C.2	The County shall not permit land uses incompatible with mineral resource recovery within areas designated as Mineral Resource Zone 2 (MRZ-2). (See Figures 7-9, 7-10, and 7-11 in <i>Fresno County General Plan Background Report</i>).
Policy OS-C.3	The County shall require that the operation and reclamation of surface mines be consistent with the State Surface Mining and Reclamation Act (SMARA) and special zoning ordinance provisions.
Policy OS-C.4	The County shall impose conditions as necessary to minimize or eliminate the potential adverse impact of a mining operation on surrounding properties.
Policy OS-C.5	The County shall require reclamation of all surface mines consistent with SMARA and the County's implementing ordinance.

Policy OS-C.6	The County shall accept California Land Conservation (Williamson Act) Contracts on land identified by the State as containing significant mineral deposits subject to the use and acreage limitations established by the County.
Policy OS-C.7	The County shall require that new non-mining land uses adjacent to existing mining operations be designed to provide a buffer between the new development and the mining operations. The buffer distance shall be based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality.
Policy OS-C.9	The County shall require that any proposed changes in land use within areas designated MRZ-2 along the San Joaquin and Kings Rivers comply with the provisions of SMARA.
Policy OS-C.10	The County shall not permit land uses that threaten the future availability of mineral resource or preclude future extraction of those resources.
Policy OS-C.11	The County shall undertake a comprehensive, watershed-based planning effort to assess future extraction of the aggregate resources and recreation uses along the Kings River as a part of an update of the Kings River Regional Plan. Such a planning effort would help to facilitate use of the resource while protecting other Kings River watershed resources and functions, including floodplain areas. (See Policy OS-H.10, Policy LU-C.4, and Program LU-C.A)
Policy OS-C.12	<p>Fresno County shall be divided into three areas for the regulation of oil and gas development.</p> <ol style="list-style-type: none"> Urban areas including all land within one-fourth mile of the planned urban boundaries shown on adopted community plans. Established oil and gas fields as determined and updated by the California Division of Oil and Gas, excluding urban areas except where specifically included in these policies. Non-urban areas including all land not within either established oil and gas fields or urban areas. A non-urban area's designation shall be changed to an established oil and gas field designation upon: (1) its identification by the Division of Oil and Gas as an oil and gas field, and (2) subsequent approval by the County.
Policy OS-C.13	The County shall require a special permit for certain oil and gas activities and facilities as specifically noted in the Oil and Gas Development Matrix (Table OS-C.1) due to their potential significant adverse effects on surrounding land or land uses.
Policy OS-C.14	The County shall permit by right small-scale oil and gas activities and facilities that can be demonstrated to not have a significant adverse effect on surrounding or adjacent land uses in an established oil and gas field, an established oil and gas field in urban areas, or non-urban areas.
Policy OS-C.15	The County may permit oil refineries to locate within areas designated by the General Plan for industrial uses. Limited oil refining plants may be permitted to locate in non-urban areas provided: the plant is limited to only fractionating and blending operations; the plant is within an established oil and gas field or within one mile of the exterior boundary of each of two (2) or more noncontiguous oil and gas fields; the site has access to both natural gas and crude oil transmission pipelines and a system of feeder pipelines from nearby gas and oil fields; the plant is limited to a refining capacity of 15,000 barrels of crude oil per day; and the site has been previously used for refining purposes.

**STATE MINERAL RESOURCE POLICIES
PUBLIC RESOURCES CODE SECTION 2762-2763
(POLICY OS-C.9)**

Section 2762

(d) If any area is classified by the State Geologist as an area described in paragraph (2) of subdivision (b) of section 2761, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a), or otherwise has not yet acted pursuant to subdivision (a), then prior to permitting a use in which would threaten the potential to extract minerals in that area, the lead agency shall prepare, in conjunction with preparing any environmental document required by Division 13 (commencing with Section 21000), or in any event if no such document is required, a statement specifying its reasons for permitting the proposed use, and shall forward a copy to the State Geologist and the board for review.

If the proposed use is subject to the requirements of Division 13 (commencing with Section 21000), the lead agency shall comply with the public review requirements of that division. Otherwise, the lead agency shall provide public notice of the availability of its statement by all of the following:

- (1) Publishing the notice at least one time in a newspaper of general circulation in the area affected by the proposed use.
- (2) Directly mailing the notice to owners of property within one-half mile of the parcel or parcels on which the proposed use is located as those owners are shown on the latest equalized assessment role.

The public review period shall not be less than 60 days from the date of the notice and shall include at least one public hearing. The lead agency shall evaluate comments received and shall prepare a written response. The written response shall describe the disposition of the major issues raised. In particular, when the lead agency's position on the proposed use is at variance with recommendations and objections raised in the comments, the written response shall address in detail why specific comments and suggestions were not accepted.

(e) Prior to permitting a use which would threaten the potential to extract minerals in an area classified by the State Geologist as an area described in paragraph (3) of subdivision (b) of Section 2761, the lead agency may cause to be prepared an evaluation of the area in order to ascertain the significance of the mineral deposit located therein. The results of such evaluation shall be transmitted to the State Geologist and the board.

Section 2763

(a) If an area is designated by the board as an area of regional significance, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2762, or otherwise has not yet acted pursuant to subdivision (a) of Section 2762, then prior to permitting a use which would threaten the potential to extract minerals in that area, the lead agency shall prepare a statement specifying its reasons for permitting the proposed use, in accordance with the requirements set forth in subdivision (d) of Section 2762. Lead agency land use decisions involving areas designated as being of regional significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of these minerals to their market region as a whole and not just their importance to the lead agency's area of jurisdiction.

(b) If an area is designated by the board as an area of statewide significance, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2762, or otherwise has not yet acted pursuant to subdivision (a) of Section 2762, then prior to permitting a use which would threaten the potential to extract minerals in that area, the lead agency shall prepare a statement specifying its reasons for permitting the proposed use, in accordance with the requirements set forth in subdivision (d) of Section 2762. Lead agency land use decisions involving areas designated as being of statewide significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of the mineral resources to the state and nation as a whole.

Policy OS-C.16	The County shall require manufacturing and marketing activities and facilities that serve the petroleum industry to be located in the appropriate areas designated by the General Plan.
Policy OS-C.17	The County shall require the timely reclamation of oil and gas development sites upon termination of such activities to facilitate the conversion of the land to its primary land use as designated by the General Plan.
Policy OS-C.18	The County shall establish procedures to ensure that exploration and recovery of mineral resources, including oil and natural gas, will occur under appropriate locational and operational standards within the Agriculture and Westside Rangeland.
Policy OS-C.19	The County shall require non-petroleum-related discretionary projects proposed on abandoned oil fields to demonstrate that abandonment and cleanup have taken place in compliance with regulations administered by the State Division of Oil and Gas (California Public Resources Code Section 2300 et seq.) as part of the due diligence procedures.
Policy OS-C.20	The County shall not allow any building intended for human occupancy to be located near any active petroleum well unless suitable safety and fire protection measures and setbacks are approved by the local fire district.
Policy LU-A.4	The County shall require that the recovery of mineral resources and the exploration and extraction of oil and natural gas in areas designated Agriculture comply with the Mineral Resources Section of the Open Space and Conservation Element.
Policy LU-B.4	The County shall require that the recovery of mineral resources and the exploration and extraction of oil and natural gas in areas designated Westside Range and comply with Sections OS-C, Mineral Resources, of the Open Space and Conservation Element.
Policy LU-C.4	The County may allow the extraction of rock, sand, and gravel resources along the Kings River consistent within the Kings River Regional Plan policies and Section OS-C, Minerals Resources, of the Open Space and Conservation Element.
Policy LU-C.5	The County may allow the extraction of rock, sand, and gravel resources along the San Joaquin River consistent with the Minerals Resources section policies of the Open Space and Conservation Element.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The mineral resources analysis is a qualitative assessment of the effects of existing and potential mineral extraction sites near existing and potential areas of new urban development. The location of new growth in the County is assumed to be primarily in the Fresno-Clovis metropolitan area.

Standards of Significance

For the purpose of this EIR, an impact is considered significant if development under the Draft General Plan would:

TABLE OS-C.1 OIL AND GAS DEVELOPMENT MATRIX				
Major Activities and Facilities		Urban Areas	Established Oil and Gas Fields	Non-Urban Areas
Oil and Gas Exploration, Drilling and Production				
	Exploratory and Production Drilling	○	●	○
	Drill Site and Pumping Equipment	○	●	○
	Production Tanks and Gauging Facilities	○	●	○
	Produced Water Treatment Facilities	○	●	○
	Production Separators (Oil-Gas-Water)	○	●	○
	Oil Field Service Lines	○	●	○
Oil and Gas Field Operations				
	Gas Compressor or Absorption Plant	○	○	○
	Steam Injection Plant	○	○	○
	Other Secondary and Tertiary Recovery Facilities	○	○	○
	Oil Cleaning Plant	X	○	○
	Natural Gas Processing Plants	X	○	○
	LPG Storage	X	○	○
	Major Petroleum Transmission and Trunk Lines	X	○	○
	Tank Farms	X	○	○
	Pumping Plants	X	○	○
Oil and Gas Auxiliary Operations				
	Offices	X	○	X
	Shops	X	○	X
	Laboratories	X	○	X
	Work Camp Living Facilities	X	○	X
	Storage Yards and Storage Facilities	X	○	X
	Oil Well Services	X	○	X
	Oil Refineries	X	X	X
	Limited Oil Refining Plants	X	○	○
●	Permitted by Right			
○	Subject to Special Permit			
X	Not Permitted			

- result in substantial conflict between existing mineral extraction operations and existing or new urban or suburban land uses; or
- result in the loss of availability of significant mineral deposits in the County.

Impacts and Mitigation Measures

4.11-1 Development under the Draft General Plan could result in the reduction of the amount of land available for mineral resource extraction.

Although the locations of major sand and gravel deposits, oil and natural gas fields, and other mineral commodities are known, not all areas of the County have been comprehensively investigated by the State or the County to identify other mineral deposits and potential land use planning implications. If development were to occur in locations where the presence or extent of extractive mineral resources has not been clearly delineated, access to those minerals could be restricted or eliminated as a result of development. Such effects could occur with or without the project as growth-related development occurs in the incorporated and unincorporated areas of the County. In addition, many areas along the Kings River and a few locations along the San Joaquin River have been designated by the State Geologist as containing regionally significant sand and gravel deposits. Draft General Plan Policies OS-C.2, OS-C.10, and OS-C.18 direct the County to consider information on the location and status of known or potential mineral deposits within the County. This would ensure that mineral resources are identified and recognized in future land use planning efforts in the unincorporated areas. Although many locations containing these deposits are within city limits and, therefore, are not under County jurisdiction, changes in land use or development at these locations would be subject to the requirements of the Surface Mining and Reclamation Act (SMARA) Sections 2762-2763, as indicated in Draft General Plan Policy OS-C.9. In addition, Draft General Plan Policy OS-C.10 would minimize the potential for future development to threaten the availability of mineral resources.

Effective implementation of the policies listed above would reduce this impact to a less-than-significant level for development that occurs within the County's jurisdiction. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.11-1 No mitigation is required beyond Draft General Plan Policies OS-C.2, OS-C.9, OS-C.10, and OS-C.18 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.

Although Draft General Plan policies would reduce potentially significant impacts related to mineral resource extraction within unincorporated areas of the County, implementation of such requirements within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.11-2 Development under the Draft General Plan could result in land use incompatibilities with adjacent mineral extraction operations.

Development under the Draft General Plan would require the use of aggregate or other mineral resources that could be extracted from existing and future deposits, some of which may be located within or adjacent to river habitats or other environmentally sensitive areas. In addition, some of the anticipated growth under the Draft General Plan could occur adjacent to areas of significant mineral resources designated as MRZ-2 or mineral extraction operations. Conflicts between existing or future mineral resource extraction sites and potential urban and suburban development could occur with the MRZ-2 areas along the San Joaquin River and Kings River. Such conflicts could occur with or without the project as growth-related development occurs in the County. Draft General Plan Policies OS.C-1 through OS.C-7, OS.C-9 through OS.C-20, LU-A.4, LU-B.4, LU-C.4, and LU-C.5 provide several mechanisms for the County to ensure that mining operations are performed safely and with regard to natural resources, and that land use conflicts are minimized. These policies, which would apply to locations in the unincorporated areas: discourage the development of incompatible land uses in such areas; require establishment of buffer zones; require preparation of operation and reclamation plans that describe how environmental effects of mining will be minimized; and allow the County discretionary authority to permit mining. For petroleum operations, applicable State laws and regulations specify development requirements that must be adhered to.

Effective implementation of the policies listed above would reduce this impact to a less-than-significant level for development that occurs within the County's jurisdiction. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measure

4.11-2 *No mitigation is required beyond Draft General Plan Policies OS-C.1 through OS-C.7, OS-C.9 through OS-C.20, LU-A.4, LU-B.4, LU-C.4, and LU-C.5 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies would reduce potentially significant land use incompatibility impacts related to mineral resource extraction within unincorporated areas of the County, implementation of such requirements within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.11-3 Development under the Draft General Plan would incrementally contribute to a reduction in aggregate resources, which may be depleted prior to 2020.

The Proposed Project would not involve any changes in extractive mineral resource operations. However, as noted in Impact 4.11-2, above, development under the Draft General Plan would increase the number of buildings, roadways, and other structures that would use aggregate materials in their

construction. The greatest amount of growth would occur in the incorporated areas of the East Valley, most of which are located in the Fresno P-C Region. Based on the updated (1999) Fresno P-C Region study, several issues were identified related to the production and future demand of aggregate resources. The 93 million tons of presently permitted PCC-grade aggregate resources (reserves) within the Fresno P-C Region will supply the demand of the region until the year 2011. The anticipated consumption of aggregate through the year 2047 is estimated to be 528 million tons, of which 264 million tons must be PCC quality. Draft General Plan Policies LU-C.4, LU-C.5, and OS-C.11 allow for the continued extraction of rock, sand, and gravel resources along the Kings and San Joaquin Rivers.

Current annual production capacity within the region is less than the annual consumption rate. Aggregate resources along the San Joaquin River are limited. With the Conditional Use Permit granted to CMI, additional deposits will be extracted along the Kings River. However, this would only provide a portion of future demand. Limited aggregate resources are available in the Coalinga area. Consequently, future supplies, including those along the Kings River, may not meet the demand of future growth that could occur with or without the project.

Future growth (with or without the project) would incrementally contribute to reduction of aggregate resources and the subsequent depletion of those resources. The long-term commitment of aggregate resources is, as yet, an unavoidable consequence of urban growth. However, this would not result in any direct significant impacts on the environment because available resources would be protected through implementation of Draft General Plan policies and MRZ-2 designations, as discussed in Impact 4.11-1, above. Specifically, Policies OS-C.9, OS-C.11, and LU-C.4 would apply to aggregate resources along the Kings River, which would be the primary source of aggregate in the Fresno P-C Region in the future. To the extent that Draft General Plan policies and applicable regulations provide for future permitted operations while protecting environmental resources, aggregate could continue to be mined from that area.

Indirect effects on transportation systems, vehicle miles traveled, and associated increases in air emissions or noise levels could occur if new or additional aggregate resources are obtained outside the Fresno P-C Region to meet future demand. It would be speculative to identify where such impacts could occur and their effects on regional resources. Other sources of construction materials may be identified in the future (e.g., quarries), and permitted operations would only be allowed consistent with Draft General Plan policies and applicable regulations, which would minimize potential environmental effects. The depletion of aggregate resources could also have economic effects by limiting future growth and employment opportunities. However, this would not result in a physical change in the environment, and this is considered a ***less-than-significant impact***.

Mitigation Measures

4.11-3 *None required.*

Cumulative Impacts

The cumulative context for loss of mineral resources is development through the year 2020 in the Central Valley, Coast Range and Sierra Nevada foothills, and Sierra Nevada, primarily on undeveloped or unaltered land containing known mineral resources.

4.11-4 Development under the Draft General Plan, in combination with other cumulative development, could result in the reduction of the amount of land available for mineral resource extraction, land use incompatibilities with adjacent mineral extraction operations, and incremental loss of aggregate resources.

Impacts 4.11-1 through 4.11-3, above, consider the effects of growth related directly to the project along with the growth that is projected to occur with or without project. Because Fresno County has been a leading producer of aggregate minerals, the loss of this resource reaches beyond the Central Valley to the extent other regions have relied upon these resources. While other mineral resource areas are available, to the extent that existing or potential future mineral resource areas are developed, or are encroached upon by development, the loss due to cumulative development would be considered ***significant***.

Mitigation Measure

4.11-4 *None available beyond Draft General Plan Policies OS.C-1 through OS.C-7, OS.C-9 through OS.C-20, LU-A.4, LU-B.4, LU-C.4, and LU-C.5.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.